## FURTHER NOTES ON THE BIRDS OF LORD HOWE AND NORFOLK ISLANDS.

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(Plates xxii.·xxv.)

The very interesting contribution by Mr. Tom Iredale, on the early records relative to the avifauna of Lord Howe and Norfolk Islands, appears to settle finally the question as to the latter Island being also the habitat of the extinct *Notornis alba*. I had already arrived at the same conclusion, and, in my previous paper,\* I assigned Lord Howe Island as the only habitat of this species.

The references in the early literature to birds of the Petrel group, however, need very careful study; and much remains to be done in the way of investigation to arrive at definite conclusions regarding the identity of the species mentioned by King, Hunter, and other writers.

I have fortunately been able to establish the Lord Howe Petrel as a distinct and new species, but there are certain conflicting accounts as to the Norfolk Island Petrels yet to be reconciled. Owing to the varying seasons at which the different species breed, and to the fact that I was only a few weeks on the Island during October and November, I was unable to make personal investigations, and have had to rely upon the statements of other observers, and the examination of eggs furnished to me by residents, for some of my conclusions.

The most puzzling species undoubtedly is the Oestrelata (Oe. phillipi Gray), which has been classed in the British Museum Catalogue and by later authorities with Oe. neglecta Schlegel. I

<sup>\*</sup> Proc. Linn. Soc. N. S. Wales, 1909, Vol. xxxiv., p.646.

have already expressed the opinion that this classification is erroneous, my reasons being (1) Dr. Metcalfe's statement that it deposits its single egg at the end of a burrow in the sandy soil, and (2) the dimensions of the egg as given by North, viz.,  $2\cdot14\times1\cdot62$  inches.† Both of these particulars, to my mind, effectually remove Oe. phillipi from Oe. neglecta. The latter species never under any circumstances uses a burrow for breeding purposes, and the dimensions of its eggs average  $2\cdot48\times1\cdot77$  inches. Dr. Metcalfe obtained two specimens of the Norfolk Island bird, one of which, I believe, was forwarded to Dr. Crowfoot. If the present whereabouts of either or both skins could be ascertained and an examination made, I feel sure that the question would be set at rest.

Captain Hunter's "Bird of Providence" is at present a mystery. I ascended Mount Pitt, and saw no signs of occupation by any burrowing bird (November); and my collector at Norfolk Island carefully examined the locality early in August of this year, but found no signs of either birds or burrows. Captain Hunter's party found a species of Petrel present on Mount Pitt in immense numbers in May, during which month most of the females were "with egg." If this species bred there now, there would be signs of recent occupation and probably immature birds in August. Apparently, however, the insatiable demands of the convicts resulted either in the complete extermination of the colony or in its removal to some more secure breeding ground. There appears little doubt that this bird belonged to the genus Oestrelata. It might have been Oe. phillipi Gray, or (a suggestion that I put forward with some hesitation) identical with the species now breeding on Lord Howe Island. The colour "rusty black" assigned by Captain Hunter is not an exact description of the latter species, but the other particulars are applicable.

I hope at some future date to procure more information as to the extent to which *Puffinus griseus* breeds on Norfolk Island.— At present the only data are Sir Walter Buller's expression of

<sup>+</sup> North, "Nests and Eggs," (1st Ed.) p.416.

opinion that Dr. Crowfoot's *P. sphenurus* (chlororhynchus) is *P. griseus*; and some eggs procured for me by a collector in December, which are certainly not those of *P. chlororhynchus*, but agree with the dimensions of those of *P. griseus*.

## OESTRELATA MONTANA, n.sp.

## Lord Howe Petrel.

General colour above slate, feathers of the back broadly margined with darker, shafts darker; feathers of the crown of the head brown, each with a narrow subterminal grey band; forehead brown, the sides of the feathers broadly margined with white; lores, feathers brown, wholly margined with white; throat slatygrey, visible bases of the feathers white, producing a mottled appearance; cheeks and sides of head brown, under surface ashy-brown, darker on the neck and abdomen, lower neck feathers broadly margined with paler shade; bases of all the body-feathers pure white; wing-coverts, primaries brown, faintly margined with grey; secondaries brighter brown, margined with lighter; primaries with quills black, except at the extreme base, where they shade gradually to white; outer webs black; inner web next to the quill blackish-grey, then shading from white at the base and for half the length of the feather to greyish-black at the tip; secondaries slate, quills black; outer web faintly margined at apical end with pale grey, inner web greyishwhite at base, blackish along quill extending diagonally to the edge of the feather, which is faintly margined with white; under wing-coverts slate, bases and margins of feathers white; rump and upper tail-coverts slate, margined with darker, becoming less dark and succeeded by a narrow white outer edge; outer tailfeathers dark slate, quills brown, basal half of inner web with narrow margin extending to apical end of outer web white; central tail-feathers almost uniform slaty-brown, with white bases, narrow edge and tips white; bill black; tarsi and first joint of inner toe horn-colour. Total length 17.6 in., wing 11.6, tail 5.45, bill 1.37, tarsus 1.68, middle toe and claw 2.45; wing extends 0.75 in, beyond the tail.

In my previous paper on "The Birds of Lord Howe and Norfolk Islands," I gave a brief description of a specimen of this bird procured by Messrs. Hedley and McCulloch, of the Australian Museum, and Mr. W. S. Dun, from Mount Gower, Lord Howe Island. I then expressed the opinion that it was a species distinct from Oe. neglecta Schlegel, with which it had been identified by Mr. North.

I have since procured another adult skin, and a series of eggs, taken on 3rd June, 1910, in the same locality by Mr. Herbert Wilson, who also furnished me with some interesting particulars regarding the habits of the bird.

A comparison with a skin of Oe. neglecta supplied to me by Mr. W. R. Brook Oliver (one of the Kermadee Island expedition) shows that the difference is very marked indeed. In fact, Oe. montana does not closely resemble any other of the thirty-two known species of the genus. It is one of the largest and most robust, and in its nature differs from the others, which are gentle and timid.

It is somewhat remarkable that this bird, locally so well known as the "Big Hill Mutton Bird," has not hitherto been described. Although it breeds only on Mount Gower, that mountain is by no means difficult of access to persons of ordinary strength and activity; indeed, several ladies have successfully negotiated the climb to the summit. A photograph of the mountain (Plate xxii.) renders a detailed description unnecessary. It is 2,840 feet in height, and the ocean front consists of a series of precipices, with steep slopes at the foot of each, covered with cliff débris, boulders, and matted cutting-grass. One of these slopes, known as the "Lower Road" (Pl.xxiii.), about 300 feet above sea-level, was the locality from which my bird and eggs were taken, but breeding places are found right up to the plateau at the top of the mountain.

In his account of the expedition to obtain specimens for me, Mr. Wilson states that the locality was very rocky, with a few patches of cutting-grass. The nests examined were all in burrows, some as much as six feet in length, and mostly constructed where the ground was wet. No nest was found in the

open, but plenty existed under the overhanging boulders in inaccessible positions. The nest was a large accumulation of cutting-grass, in which the egg was almost concealed. All the burrows examined had two outlets(See Plates xxiv., and xxv). Mr. Wilson says "the birds would stop and fight for a while. They can bite harder than any bird I have ever robbed. I have got some of the marks on my hands yet (12th July)." He located the sitting birds by calling out, when the birds gave an answering cry from their burrows. He saw no variation whatever in the colouring of the plumage of the birds seen, but some were slightly smaller than others. One bird only occupied the burrow, the mate being at sea. One egg only is laid for a sitting, as in the case of all other members of the Petrel family. Those procured are mostly stout oval in form, some being more pointed than others; colour soft dull white, with large, shallow, irregular pittings. The dimensions of eight specimens obtained by Mr. Wilson are as follows:-(a)  $2.6 \times 1.9$ , (b)  $2.6 \times 1.86$ , (c)  $2.55 \times 1.92$ , (d)  $2.55 \times 1.87$ , (e) 2.5 $\times 1.96$ , (f)  $2.5 \times 1.88$ , (g)  $2.44 \times 1.9$ , (h)  $2.4 \times 1.9$ . Average dimensions,  $2.52 \times 1.9$ . The average dimensions of nine eggs of Oe. neglecta, from the Kermadec Islands, are  $2.48 \times 1.77$ .

## EXPLANATION OF PLATES XXII.-XXV.

Plate xxii.

Mounts Gower and Lidgbird, Lord Howe Island. (Photo by A. F. Basset Hull).

Plate xxiii.

The Lower Road, Mount Gower, a breeding-place of Oestrelata montana. (Photo by A. R. McCulloch).

Plate xxiv.

Oestrelata montana, adult at entrance to burrow under overhanging rock, Mount Gower. (Photo by A. R. McCulloch).

Plate xxv.

Oestrelata montana, nestling taken from nest, and placed above entrance to burrow; Mount Gower. (Photo by A. R. McCulloch).